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Harlequin colour change in a neonate with perinatal asphyxia: An unusual pattern

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Figure 1. Harlequin colour change (face and extremities red)

Harlequin color change is a skin phenomenon first described by Neligan and Strang in 1952 in neonates¹. It is characterized by transient reddish color change or erythema of one half of the body or part of the body, clearly divided at the midline of the body. This phenomenon is seen around 10% of healthy neonates². It is generally observed between 2 to 5 days after birth although a few cases are reported delayed up to 21 days. This erythematous phenomenon can last from 30 seconds to 20 minutes and then after blurs away. It occurs when the neonate is positioned on his or her side. The intensity of colour is gravity dependent and variably occurs from one neonate to another³. A change in temperature, position or mood can cause transient changes in the width of the blood vessels resulting in colour changes of the overlying skin.

Here we describe a newborn that developed an unusual distribution of skin colour change. The baby was born at term and did not cry at birth, was kept as a case of hypoxic ischemic encephalopathy stage 2. The baby was stabilized by day three and was tolerating oral feeds well. On day 4 of life the baby developed an unusual colour change with hyperaemia of the face and extremities. The rest of the body remained normal in colour. There was no change in vital parameters associated with this phenomenon. This change gradually resolved on its own after 3-4 minutes.

According to some authors, this occurs due to temporary imbalance in the tone of cutaneous blood vessels secondary to immaturity of hypothalamic centre⁴. It is often seen in healthy neonates. It is also associated with prematurity, low birth weight, asphyxia, and systemic use of prostaglandin E1, or intracranial injury, meningitis and even with anaesthesia^{5, 6, 7, 8, 9, .} In maximum number of the cases, harlequin colour change is a benign physiological transient skin change, completely harmless and should be identified properly to avoid unnecessary treatment.

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